

REMARKS

Claims 1-18 are pending. Claims 1-18 are rejected. No new matter has been added.

35 U.S.C. 103(a) Rejections

Claims 1-3, 5-8, and 11-18 are rejected under 35 U.S.C. § 103(a) as being obvious over Muntz, U.S. Patent No. 6,141,348, in view of Farinacci et al., U.S. Patent No. 7,016,351.

The Examiner is respectfully directed to independent Claim 1, which recites that embodiments of the present invention are directed to:

A method for generating a modified packet for output from a router, comprising:
 storing a received packet in a first memory;
 computing modified bytes corresponding to said packet;
 storing said modified bytes in a second memory;
 multiplexing select unmodified bytes corresponding to said packet stored in said first memory with said modified bytes in said second memory to generate said modified packet.

Claims 5 and 15 recite similar limitations. Claims 2-3 are dependent upon Claim 1, and recite further features of the claimed embodiments. Claims 6-8 and 11-14 are dependent upon Claim 5, and recite further features of the claimed embodiments. Claims 16-18 are dependent upon Claim 15, and recite further features of the claimed embodiments.

The present rejection suggests that Muntz, in combination with Farinacci, describes every element of the embodiment recited in Claim 1. Applicants respectfully disagree, and assert that Muntz, alone or in combination with Farinacci, fails to teach or suggest a method for generating a modified packet for output from a router which includes storing modified bytes in a second memory, as claimed. Applicants further assert that Muntz, alone or in combination with Farinacci, fails to teach or suggest a method for generating a modified

packet for output from a router which includes multiplexing select unmodified bytes corresponding to a packet stored in a first memory with modified bytes in a second memory to generate a modified packet. Moreover, Applicants respectfully assert that the rejection fails to set forth a *prima facie* case for obviousness under 35 U.S.C. § 103(a).

Applicants have reviewed Muntz, and understand it to purport to describe a system for quickly extracting information from arbitrary fields of a packet (col. 2, ln. 66-67). To this end, Muntz suggests the use of one or multiplexers coupled to programmable bit number processors (col. 4, ln. 41-47), which extract one bit each per clock cycle, until the desired number of bits have been extracted (col. 2, ln 53-61; *see also* col. 5, ln. 65 - col. 6, ln. 22).

The system described by Muntz (*see, e.g.,* Fig. 3 *and* Col. 4, ln. 62 – Col. 5, ln. 27), performs certain, specified, sequential actions. A data packet header (302) is stored in a memory (312). This memory is connected to a multiplexer (320), which is controlled by a processor (330). The processor and multiplexer are used to extract bits corresponding to selected fields from the stored header; these bits are stored in a result register (340). This process is repeated until a desired number of bits have been extracted (Col. 5, ln. 24-27).

In the preceding Office Action Response, Applicants requested clarification, as regards the claimed element of storing *modified* bytes in a second memory, as the preceding rejection did not explicitly indicate where Muntz taught or suggested this limitation. The current rejection similarly neglects this element.

Accordingly, Applicants respectfully assert that the rejection fails to present a *prima facie* case of obviousness, under 35 U.S.C. 103, in that the prior art references fail to teach or

suggest all of the claim limitations. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). (See also MPEP § 2142, 2143.)

As noted above, the present rejection does not provide a citation in Muntz, wherein Muntz teaches or suggests storing modified bytes in a second memory, as claimed. Moreover, Applicants do not read Muntz to provide such a teaching. Muntz, in all described embodiments, teaches a memory (e.g., memory 312) for storing the packet header, and result registers (e.g., result register 340) for storing *extracted* bits. No mention is made in Muntz of storing *modified* bytes in a second memory, as claimed. As noted in the pending application, usage of a second memory for storing modified bytes corresponding to a packet offers significant advantages, e.g., pre-computing (see Application, pg. 10, ln. 9-15).

Farinacci fails to remedy this defect in Muntz, in that Farinacci similarly fails to teach or suggest a method for generating a modified packet for output from a router which includes storing modified bytes in a second memory, as claimed.

Moreover, Applicants respectfully contend that Muntz, alone or in combination with Farinacci, fails to teach or suggest a method for generating a modified packet for output from a router which includes multiplexing select unmodified bytes corresponding to a packet stored in a first memory with modified bytes in a second memory to generate said modified packet, as claimed. The present rejection asserts that Muntz suggests “determining the next hop of the packet and then rewriting this information in the packet header.” Even if

Applicants accepted that Muntz can be read to provide this suggestion. Applicants

respectfully disagree that this suggested determination is equivalent to the claimed limitation.

Specifically, Applicants contend that Muntz cannot be read to suggest *multiplexing* select unmodified bytes corresponding to a packet stored in a first memory with modified bytes in a second memory to generate said modified packet, as claimed. While Muntz includes multiplexers, the only usage Muntz assigns the multiplexers is to extract bits from the packet header (*see* multiplexer 220, multiplexer 320, and multiplexers 420, 422, 424, and 426). No where does Muntz suggest multiplexing unmodified portions of the header with modified portions stored in a second memory, in order to generate a modified packet, as claimed.

Farinacci fails to remedy this defect in Muntz, in that Farinacci similarly fails to teach or suggest a method for generating a modified packet for output from a router which includes multiplexing select unmodified bytes corresponding to a packet stored in a first memory with modified bytes in a second memory to generate said modified packet, as claimed.

Therefore, Applicants respectfully contend that Muntz, alone or in combination with Farinacci, fails to anticipate or render obvious the embodiments of the present invention recited in Claims 1, 5, and 15. Accordingly, Applicant respectfully contends that Claims 1, 5, and 15 overcome the basis for rejection under 35 U.S.C. 103(a), and are in condition for allowance. Therefore, Claims 2-3, dependent upon Claim 1, Claims 6-8 and 11-14, dependent upon Claim 5, and Claims 16-18, dependent upon Claim 15, also overcome the basis for rejection, as being dependent upon an allowable base claim.

Claims 4 and 9-10 are rejected under 35 U.S.C. 103(a) as being obvious over Muntz.

in view of Farinacci, further in view of Belz et al., U.S. Patent No. 6,980,552.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Claim 5 recites similar limitations. Claim 4 is dependent on Claim 1, and recites further features of the claimed embodiments. Claims 9-10 are dependent on Claim 5, and recite further features of the claimed embodiments.

Applicants respectfully assert the above-presented arguments, regarding Claim 1 and the combination of Muntz and Farinacci. Belz fails to remedy these defects in Muntz, as Belz does not teach or suggest a method for generating a modified packet for output from a router which includes storing modified bytes in a second memory, as claimed. Further, Belz does not teach or suggest a method for generating a modified packet for output from a router which includes multiplexing select unmodified bytes corresponding to a packet stored in a first memory with modified bytes in a second memory to generate a modified packet, as claimed.

Therefore, Applicants respectfully contend that Muntz, alone or in combination with Farinacci or Belz, fails to anticipate or render obvious the embodiments of the present invention recited in Claims 4 and 9-10. Accordingly, Applicant respectfully contends that Claims 4 and 9-10 overcome the basis for rejection under 35 U.S.C. 103(a), and are in condition for allowance.

Conclusion

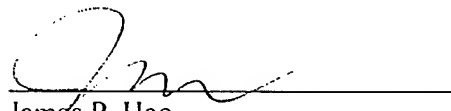
In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' representative William P. O'Meara at 970-898-7917, if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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Date: 4/18, 2007


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